1: Gillin E-5 · · (1932-33) 1936 SR9 Carib SR9

There is, however, a limit of personal ornamentation beyond which an individual's movements in dancing and drinking activities are hindered at the expense of sociability. I have never seen a Carib "loaded down" with ornaments, although it would be comparatively simple to accumulate enough teeth, seeds, beads, in a lifetime to cover the body completely from head to foot. Cotton dresses are greatly prized by the women, but two or three such garments are considered quite sufficient. I have known many women who have urged their husbands to work enough to buy cloth for one or two dresses, but who have lost interest after sufficient cloth had been acquired. Men also desire singlets, trousers, and felt hats, but a Carib who has one of each of these in good condition cannot readily be interested in the acquisition of additional outfits.

Tobacco of European manufacture is perhaps the greatest luxury in the region, but I have never observed a tendency to hoard it on the part of those lucky enough to obtain some of this product. Thinking to stem the ceaseless requests for tobacco, I tried the experiment of presenting certain individuals with whole cans of Capstan, only to find that they had wasted it or given it away and were soon begging for more.

The only circumstance in which property factors enter directly into the social situation is that in which a man by reason of laziness becomes a continual borrower from his neighbors. (See section on Crime and Punishment.) If such a man does not reform, he will be eliminated from the social life of the settlement and eventually be forced to take up his residence elsewhere.

Economic activity among the Caribs, then, is based on need. Each family is responsible for itself, and although co-operation in labor and lending of goods is common, the principle of individuality in property remains intact. Accumulation of wealth is of little social importance because one does not need accumulated wealth to fortify or improve one's social position. The reasons for the absence of such need are to be found in the interaction of the culture and the environment.

Let us now turn to the economic activities of the inhabitants of Sawari. In the first place, two different arrangements are in force in regard to agricultural plots. These two types of arrangement are illustrated respectively by the partnership and individual fields.

1: Gillin E-5 (1932-33) 1936 SR9 Card SR9

no definite lines. Thus, during my stay in the settlement John Cook and his brother Daniel built a woodskin together; sometime later Edwin and Henry Daniel co-operated in the building of a cassiri kanu (or barrel); David's son-in-law, Joseph, on the other hand, constructed a korial (dugout canoe) single handed. 476

The only house built during my stay was the half-completed structure begun by Henry (husband of Caroline). In this task he did most of the work, assisted somewhat by Samuel, the husband of Caroline's chum and sister, Elizabeth.

Thus we see that economic status and co-operative effort have little connection with social differentiation in Sawari. 182

Economic opportunity, on the other hand, may be said to be a factor in the unifying of a settlement. John Cook and Henry (Caroline's husband) are two examples of men to whom the fields, hunting grounds, and trade goods of Sawari appeared as attractions. Exhaustion of arable land or hunting territory will, conversely, tend to disintegrate a settlement. Although this has not occurred yet at Sawari, it is an important consideration in other cases, for instance, Korotoko, which was completely abandoned on account of the exhaustion of the soil.

Friendships. Friendships are closest between men of the same clearing. Indeed, this factor seems to be an important one originally in the local groupings, as already demonstrated. Within Miller's clearing, Samuel and Joseph (David's son-in-law) spend a good deal of time together. John Cook and his brother Daniel are close. Edwin and John (of Cook's settlement) often hunt together. Other friendships were not outstanding, with the exception of the one which sprang up between my interpreter and Samuel, both perfect strangers when they first met. On the basis of information gained from informants here and in other villages I was unable to conclude that friendships rigidly follow either the lines of blood or of locality. As among ourselves, they are based on more or less complex personal factors, often imponderable, and as among ourselves, they vary in stability and intensity. Witness the crumbling of the friendship between Miller and Cook. In any case, friendship, so far as I was able to learn, implies no ritual or magical connection between the participants, nor does it take on the full solemnity and earnestness of a David and Johnathan relationship. Friends simply spend time together, some- 572

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

household, a certain amount of fidelity to each other, rearing of children) which are not required of them before marriage.

Old people, of whom there are relatively few in this society, are treated with respect, but not exaggerated deference. In fact in many respects they are considered less than complete members of society, inasmuch as they are unable to carry out many of the functions required of more vigorous members of the group. The respect for old age varies with the intelligence of the aged individual. For instance, David at Sawari is deferred to on account of his lore and skill in religious techniques; his mind is still functioning actively, and thereby he maintains his social position despite his uselessness as a hunter and laborer. He is the only aged person in Sawari, and he is by no means completely decrepit. Two very infirm old women observed by me, one at Kurasani, the other at Baramita, were unable to move from their hammocks. They were fed and treated well, but ignored in regard to the decisive actions of their respective communities. Several old men, still more or less active physically, whom I observed at various places in the area, occupied positions no better and no worse than their personalities, physical exploits, and intelligence won for them. There is no pattern of implicitly obeying old age, of consulting it with reverence, simply because of age.

The Drinking Spree. We have discussed the underlying factors which serve to hold the individuals of the group together. In an individualistic community, where everyone goes about his own business and is largely self-reliant, what mechanism is at work to remind the members of the group of their common interests? We have seen that in everyday affairs men and women may meet face to face in pairs or threes, incidentally to their daily life, but we have as yet seen no occasion on which all the members of the group come together to renew the ties that bind them into one community. If one searches for a mechanism which periodically reunites the group, a mechanism of socialization, I think it must be found in the drinking spree.[1]

Throughout the year, when the cassava can be spared for making drink, sprees are held occasionally. During the months of

[1] Certain religious functions call together the whole community, notably the supplication to the spirits for a good cassava crop (described in the section on Religion). On these occasions, however, the lay members of the settlement are merely spectators or auditors of the ritual carried on by the piaiyen.

1: Gillin E-5 (1932-33) 1936 SR? Carib SRO

from which the others are excluded, thus building up its own solidarity. 527 156

Summary. In summarizing the situation in Sawari we are justified in concluding, I believe, that the most important factors of unity are blood relationship, relationship by marriage, friendship, and economic opportunity. 182

The factors which tend to disrupt the unity of the settlement are personal dislike, insufficient economic opportunity, death, and divorce.

Leadership of the community is here based on personality, intelligence, initiative, physical ability, and relationship. Thus Miller, the headman of the whole village, was the first man to cut a field in this vicinity, thereby giving a demonstration of his initiative, physical ability, and intelligence. He attracted a group of friends and relatives about him, who on account of all these factors were willing to submit to his authority, such as it is. The same factors are seen to be at work in the off-shoot group represented by Cook's clearing with Cook as its leader. Children and youths are subordinate to adults, but among the latter such inequality as exists is based on personal factors. 554 622

Sawari, therefore, like the other Carib villages on the Barama, is a local grouping of families, united around a leader for the reasons mentioned above. No single factor is alone operative in bringing together such a group, no single factor can be said to be the exclusive cause of its disintegration.

The balance between the forces of unity and of disintegration in a Carib settlement is exceedingly delicate. The membership is continually shifting, and the life of an average settlement is apparently comparatively short. Sawari was founded perhaps ten years ago by Miller, after his sojourn in the toils of the law. It is still growing, but in a fluctuating fashion. Many of the newly married residents have been members for only a year or two. Joseph (David's son) joins the settlement, Henry (Caroline's husband) leaves in the space of a few months. It is quite likely that further additions and subtractions will take place at about this rate until the settlement for one reason or another is finally abandoned. 182

1: Gillin E-5 (1932-33) 1936 SR9 Carib SR9

the going is good." I know of one man on the Barama who has been ejected from six consecutive settlements in this way, so that he has become a permanent outcast. 626

It is apparent that the great majority of punishments are handled by individuals. The tendency is to carry out the retaliation as secretly as possible. But why this bashfulness and fear of coming out into the open when settling accounts with a wrongdoer? The Caribs, when questioned directly, reply that secrecy prevents further reprisals and also prevents the culprit from protecting himself against a deserved punishment. I believe that the social function of keeping these matters under cover is to prevent rifts from reaching the surface, so to speak, and thus splitting the group apart. A Carib group lacks strong central authority of any kind. In the absence of adequate political, judicial, or police authority, secretive methods of punishment have evolved as the only possible means of enforcing the "law" without destroying group life. When a man sets out to punish an offense he usually attempts to keep his activities secret, not only from the object of his punishment, but also from other members of the settlement. Only rarely is open violence resorted to or are other members of the group, such as relatives, admitted to the case. 627 182 621

It may be asked, however, if the looseness of the group is not due to the unorganized condition of the legal and penal programs. It is obvious that the absence of a socialized or public method of determining guilt, such as a court, leaves many of the antagonisms in society uncomposed. It is true that cases which come out into the open and are punished openly, such as the killing of the adulterer, appear before the court of public opinion. But many grievances, as we have seen, are handled secretly, and the guilt of certain parties is often based only on suspicion. In such cases punishment may fall on innocent parties, who naturally take offense and retaliate. Consequently, the solidarity of the group is likely to suffer.

Ignoring the theoretical question as to the relative effect of external as compared with internal conditions on the institutions of a society, I believe that in the case of the Barama Caribs external environmental and political factors have played the preponderant part in molding the institutions of this society as they

1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

621 exist at present. In this region a hunting, fishing, and agricultural
627 life restricts the size of the group and isolates it. Only a small
182 group with a wide territory about it can exist, if the people are to have sufficient animal food. Furthermore, the available crop-raising soil in any one spot will support only a small population, because of the fact that cassava requires a drained sandy loam, a type of soil which is found only in small and widely scattered areas in the jungle. This soil, even when located, will, however, produce only two good crops, after which the field must be abandoned and a new one cut, making the disposition of the fields and the membership of any given settlement unstable. Even the term of existence of the settlement itself is usually limited. Hunting operations as carried on here also make for social instability and individuality, because hunting can be done most successfully by one man and seldom in parties of more than four. It is also often necessary for a man to be away from home for several days following game, and since whenever possible a Carib takes his wife and children with him when he is away over night, this factor also contributes to the looseness of the established group.

177 Even so, it seems that a stronger organization than the present
621 was formerly maintained for purposes of war and defense. Since the early part of the nineteenth century, however, the European political control of the colony has succeeded in repressing inter-tribal warfare. With their cultural background, therefore, the Caribs have found environmental conditions and exterior political conditions unfavorable to the development of political power and group solidarity. As a consequence, I think, legal, judicial, and penal institutions which otherwise would support such a solidarity, show little formal development.

RELIGION

776 **Supernatural Beings.** The Carib world is jointly inhabited by human beings and a number of supernatural powers. There are two kinds of supernatural beings, spirits and ghosts. The former are independent beings or powers, the latter represent the souls of dead human beings. (Spirit, akuru; ghost, yumbupa akasang.) The supernatural beings of the first class, which we will call spirits, inhabit the land, the water, the air, and at some time

121 informants or locations, another dimension is added here. Individ-
114 uals can be identified and the establishment of trans-generational
124 continuity is possible.

121 Two areas of theoretical concern particularly lend themselves to
*177 investigation under the fortuitous circumstances of being able to
[161] trace changes occurring over time among a specific group. The first
is cultural change: the second, human population control mechanisms.

175 In regard to cultural change, until forty years ago the Caribs
*177 of the Upper Barama River were adapting to the equatorial rain
• 182 forest with essentially a lithic technology. They combined hunting,
[22] fishing, and collecting with a semi-nomadic form of horticulture.
[241] Currently, the majority of these Caribs are settled at a community
*177 known as Baramita Air Strip. They engage in wage employment, make
[465] use of regional markets for local products, participate in agricul-
[438] tural development programs, and benefit from national medical
[242] programs. From a position of relative isolation in the rain forest,
[657] this group has been increasingly encapsulated in the national
[161] political economy. Attending this development has been changes in
their population size and composition as well as internal organiza-
tion. These changes are a major focus of the present study.

121 In pursuing the analysis of these changes, cultural materialism
is relied upon as the most economical mode of explanation. Among
others, Harris (1968) has proposed that techno-environmental
determinants can serve in a comparative approach to cultural
adaptation. One example of this approach is Murphy and Steward's
comparison of the Mundurucu of Brazil and the Northeastern

121 Algonkians of Canada (1956). The Schwerin report (1966) and
[114] particularly Kloos' (1971) analysis also employ a frame of reference that gives emphasis to techno-environmental factors that are generative of cultural adaptation and change.

121 Accordingly, it is proposed that the organizational strategies of
*179 human populations conform to determinants of the exploitative technologies and the resources available. This hypothesis is used to inquire into cultural change among the Caribs of the Upper Barama River. The Carib population identified as the unit for study is a
101 [161] small group, currently numbering about 550. They alone inhabit the Upper Barama River drainage basin. The boundaries of the local population are identified operationally by the cultural practices which maintain a shared set of material exchanges (Rappaport 1969: 184). However, these cultural practices have changed as the
101 *179 materials or resources available to be exchanged have been altered. Over time, external resources have been added to those locally available. What has been maintained is the common participation of this population in these exchanges. Changes affecting the resources available to the Upper Barama River Caribs will be more fully explored in Chapter II.

121 A second problem with which this study is concerned has to do
• 182 with certain aspects of human population ecology. Alland (1967) proposes that population adaptation is situationally specific. Accordingly, human adaptation measured by population size can be evaluated in two instances: (1) when two competitive populations occupy the same environment; and (2) when one population occupies

121 a particular environment over a prolonged period of time. This
182 study uses the second option.

However, Alland also proposes that trans-generational population studies be conducted with a systemic reference. The manner in which population size is changed and acts to transform the system of which it is a variable is to be investigated. Previous ecological studies have been conducted on single human populations. Such studies include those by Steward (1938), Vayda (1961), Leeds (1965), and Rappaport (1968). The problems focused upon are relationships among environment, technology, population size, and cultural patterns. These relationships also are considered here. However, this study substantially from these previous ones. First, this is a trans-generational study; because of the data available, changing population adaptation can be evaluated. Also, the systemic assumptions which these earlier studies rely upon cannot be made here. Among the Caribs of the Upper Barama River area, the rapidly changing impact of regional resources does not allow the postulation of an equilibrium system operating within identifiable parameters. Rather, within the limits of the phenomena, the concern here is more simple and direct. The responses of cultural patterns and population size to independently occurring, external resources are explored. The nature of these correlations, rather than their causes, is the object of this inquiry.

121 With regard to population size, it has been noted (Birdsell 1953,
182 Stott 1962, Alland 1970) that human populations adapting to local
161 environments with a lithic technology disclose a relatively low

population density. For the most part, these ecological studies consider population size a variable in a closed system. Thus, low density is attained by behavioral patterns which regulate population size relative to local resources. Cultural practices which control conception or carry a high mortality hazard for an age segment of the population intervene to limit the population size below the limits of the available resources. In the case of the Upper Barama River Caribs, changes in population size will be investigated in relation to a succession of external resources and can be easily identified.

Data for this study were collected from several sources. Gillin's report on the same group, The Barama River Caribs of British Guiana (1936) has already been mentioned. In addition, archival data of a general nature and census reports were collected in Georgetown. Finally, field work was conducted on the population in question over a nine-month period in 1970-71.

In sum, this inquiry is a case study of cultural change and attendant shifts in aspects of the human population ecology. The focus is directed to adaptations made by the Upper Barama River Carib population with their entrance into a regional political economy. The nexus between the nature and extent of external resources available in the Upper Barama River drainage basin and changes in the organization and size of the local Carib population will be explored in the following chapters.

133 into the Barama at about 450-500 feet above sea-level and has a diminishing gradient of a little over two feet a mile to the top of the Great Falls which drop eighty to eighty-five feet in a distance of about half a mile (Bishop 1941:7). The plain is interrupted by the outcropping of the gneiss-granite bedrock to form the Frasier Falls. About thirty-five miles above Towakaima, the Frasier series of rapids are about two miles long and present a very small total drop (Bishop 1941:4). The Upper Barama River is fed predominantly by tributaries on its right (south) bank. These tributaries follow the grain of the gneiss-granite bedrock and are mainly blackwater creeks which have a low potential for human exploitation. Such creeks are dark brown in color due to oxygen deprivation caused by decaying vegetable matter which also releases carbonic and humic acids (Meggers 1971:12).

13 Thus, there are three local micro-environments which yield biotic
182 resources for human use. These are the river system, the naturally
241 occurring rain forest, and the man-made fields of cultigens. From these, floral and faunal resources are exploited.

Floral Resources

824 Local vegetable foods are those that occur in the forest and those
241 that are cultivated. However, there is no clear line dividing the two. The slash-and-burn horticulture by which vegetable foods are obtained is a modification of the rain forest. The cultigens are integrated into the forest in a way that they temporarily replace its floral community (Geertz 1963:15-28; Meggers 1971:19-21). From the

future use.

As is evident from these data, the dependence on local biotic resources has not remained constant. For the most part, the introduction of iron technology, guns, and new cultigens has not greatly changed the patterns of exploitation of biotic resources. However, cultural changes brought about by the local availability of regional resources have had consequences in the degree to which the forest flora and fauna are exploited as well as the extent of the manipulation of cultigen communities. The history of these external resources may be summarized as follows.

Regional Contacts and External Resources

The scattered Carib settlements reported by Gillin (1936) along the length of the Upper Barama River have been abandoned. Amerindians have been attracted by enclaves of introduced economies where new resources are available. In the Upper Barama River area, gold mining activities and later a government settlement project have involved the local population. Also, Caribs have migrated out of the Upper Barama River drainage basin. Groups of Amerindians have gone to Matthew's Ridge, others to the Cuyuni River.[1]

More specifically, this study concerns the succession of regional influences and the resultant human adaptations in the Upper Barama River area. These external resources which have affected the local population size and social organization have reached the Upper Barama River Caribs through two channels. Some have come as public services available to Amerindians through various governmental agents. Other

175 628 Upper Barama seem to have been more frequent than contacts among the Carib settlements in the upper section of the Upper Barama. However, it is also apparent that the most immediate external contacts each group of settlements had were with each other.

In 1932-33, the frequency of contacts seems to have been relative to distance. That is, no specialized settlements are reported in respect to seasonal or other activities. All Carib settlements seem 175 361 to have been much alike in their dependence on the rain forest. The • [82] bush resources relied upon include predominantly territorial animals and widely dispersed plant species. Desirable land for cultivation, a mixture of sand and clay on a hillside in close proximity to a permanent stream, was limited (Gillin 1936:14). As a consequence, settlements are widely scattered. Figure 7 depicts the dispersed nature of Carib settlements in the Upper Barama River area for this earlier time period. Realignments would occur with the relocation of settlements. After a number of years, a move might be made to more advantageous hunting and gathering and more fertile soil. Other cultural practices as well promoted this scattered, shifting pattern [586] of settlement. A divorce tended to result in the relocation of [572] individuals (Gillin 1936:79-80): the rupture of male friendships, in [775] the relocation of households (1936:136). Also, due to a belief in [768] the malevolent nature of a person's spirit, a clearing would be abandoned in the event of a death (Gillin 1936:165).

175 *177 361 Later, with the availability of external resources, settlements were no longer scattered solely along the Barama River corridor. Over time, a centralization of settlements developed in relationship

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2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

IV

MARKET OPPORTUNITIES: REGIONAL NETWORKS OF EXCHANGE

*179 438 439 Over time, the subsistence economy of the Upper Barama River Caribs has been supplemented by various regional markets. As a consequence, the common material exchanges that serve the Upper Barama River Caribs as a population have changed. An increasing [182] extralocal involvement in regional networks of exchange has been added to a local adaptation to the rain forest, and new resources have been made available to this population.

175 182 During Gillin's study in 1932-33, subsistence resources were derived primarily from the natural environment. The similar nature of the local adaptations of the Carib settlements dispersed along the [628] [938] Upper Barama River corridor has been discussed. There was no apparent basis for specialization and trade among settlements. Within each 175 421 settlement, material property was individually owned. A man owned his clothing, field, house, hunting and fishing equipment, canoe, tools, and the game he caught (Gillin 1934:335). A woman owned her clothing, implements for working in the field and house, including pottery and basketry (although basketry was exclusively made by the men in their household). All tools were usually manufactured by the individual owning them or someone in their household. Within settlements, food [621] was distributed, tools were shared, and assistance rendered in the activities of making a living in the bush.

*177 or 37.7 percent of the total population frequently sold provisions at
175 the trade store. This segment of the population also participated in
361 the ancillary regional exchange networks provided by the missionaries
438 and the Amerindian Captain. The remaining 28.4 percent of the popu-
[484] lation, the 143 individuals in the more remote settlements, made more infrequent trips to the trade store at In Time. Either through informal trade among Caribs themselves or the centralized channels created by the trade store, mining activities involved the entire local population in a common network of regional exchanges. In turn, this network was changed by the abandonment of In Time.

Regional Exchanges Centralized at Baramita Air Strip

*177 The cessation of mining activities late in 1969 again altered the
175 subsistence patterns of the local Carib population. That segment of
464 the population dependent on employment at the mine and maintaining no
511 farms was faced with a subsistence crisis. The opportunities for the remainder of the population to sell provisions was greatly reduced.

*177 During the spring and summer of 1970, the Government began introducing
175 programs and services to sustain this population. The new govern-
464 mental offices have already been detailed (see Figure 3). The
657 resources conveyed to the population through these new channels remain to be discussed. As data are available only for the first year of these new programs at Baramita Air Strip, this must remain a preliminary report.

*177 The first year at the Air Strip was one of general parsimony. Job
182 specialization among the Caribs was almost eliminated and everyone
[463] returned to rain forest subsistence.

000 *177 241 *177 464 returned to rain forest subsistence. There was no household without a large farm, but it was some time before new farms became productive. In addition, all of the Carib men were anxious to gain some money income to buy commercial items they had come to consider a need. However, there were few employment opportunities and the demand for local products was very limited. Although maintaining a subsistence [182] [361] relationship to the rain forest, the population nucleated around the air strip as much as possible to make use of the few remaining resource opportunities, including health care, food programs at the school, and whatever was available by way of casual wage work.

More men sought work than that available. Government station hands were hired. Work involved carpentry, cutting grass, filling water tanks during the dry seasons and other tasks. For a time, four men had these jobs. By spring 1971, only one man was left in this employment. Also, occasionally men were hired on project work, including stumping out areas, lopping down secondary bush at the extreme ends of the air strip, and building a clinic under one of the government residence houses. The pay for this work was about $4 a day, and [465] [466] the work schedule was from 6:30 A.M. to 2:30 P.M., allowing the men time to farm or hunt during daylight hours.

Baird's private activities also entailed some employment opportunities. He was considering a partnership which would take him to the Potaro River for gold mining. He made a three week prospecting trip there in November 1970 and took along six of his former workers.

Other opportunities for work at the Air Strip involved carrying loads for the Medical Ranger and the Agricultural Field Assistant.

*177 the small aircraft. As is common in the handling and transportation
657 of tropical fish, many would die. Up to as many as ten percent of
226 the fish would be lost in transit to Georgetown, and the proprietor
439 cut the price to 4 1/2¢ per live fish he received. After a few thousand catfish had been sent to Georgetown, tropical fish operations were suspended.

*177 With this proliferation of small market opportunities, a money
438 economy continued to develop in the Upper Barama River area after the
436 closing of the mine. A government trade store is now located at
*177 Baramita Air Strip and operated by the Project Officer. During
657 1970-71, the minimal stock of tinned sardines, salt fish, flour, rice,
443 sugar, cigarettes, matches, ammunition, cutlasses and knives, cloth
438 lengths, pants and shirts, school exercise books and pencils was
439 sometimes depleted by delay in the shipment of supplies from George-
*177 town. More often, Caribs did not have the cash to make purchases.
436 Money tended to be a more specialized means of exchange. Only it could
• [182] be used to purchase commercial goods. As a consequence of the limited circulation of money among this population, there occurred a renewed
*177 reliance on bush resources for food and tools. Secondary networks
438 for the exchange of local provision foods greatly disappeared. A
[464] marked separation of those employed and unemployed during the mining
*177 economy was lost. In contrast, a diversity of limited opportunities
438 to directly participate in regional exchanges was available more
439 generally to the population at Baramita Air Strip. In this manner,
[657] the regional economy among the Upper Barama River Caribs has been supported by the national government since the closing of the mine.

indication that the natural environment has been permanently degraded in any manner. However, some Caribs have neglected bush farms; specifically, those who regularly worked as miners at In Time. With the rupture of their source of provisions, the former miners and their families were faced with a subsistence crisis when In Time was closed. As an emergency measure, government subventions were introduced to sustain these people while they re-established bush farms. This was not a simple matter of waiting for the first crop. Although the manioc cultivated by the Upper Barama River Caribs is usually mature in nine months, it was commonly harvested as early as four months by the residents of Baramita Air Strip during 1970-71. Immature manioc obviously yields less calories than the mature crop, and a deficit in future crops was established. Also, a closer scouring of the natural environment for all sources of food, however minute, and, inevitably, hunger ensued among the Carib population at Baramita Air Strip.

In their remote rain forest environment, there have been no opportunities among the local Carib population to acquire resource banks which might include livestock, real estate, local enterprises such as shops or other mechanisms to divert, store, or otherwise manipulate the resources conducted through regional networks. Even agricultural fields, a primary local resource, are dependent on the labor extended to develop them and are eventually reclaimed by the forest. This underscores the lack of any other basis to hedge against the insecurity of external resources except to continually spend the labor to maintain farms in the bush. In the same manner, there is

of external resources. Larger numbers of people have come to live near each other without immediate cooperative bonds. Visiting commonly takes place during cassiri sprees which now last a number of hours rather than the several days reported by Gillin (1936:65). Among neighbors, contacts depend on the inclination and personalities of the people involved. This aspect of community life is foreshadowed in the school experience[7] of the children. They are brought together in age categories to learn, play, and form relationships on an associational basis. More permanently settled in centralized locations, the Upper Barama River Carib population has become organized as a local, small-scale society within the overarching national political economy.

However, the resource base on which this population depends remains fluid. For the majority of people, external resources are not reliable. Thus, agriculture in rain forest soil remains a prerequisite for permanent settlement. The encapsulation of this population relative to transportation and communication networks and the lack of resource-storing mechanisms have already been discussed. As a consequence, the Upper Barama River Carib population utilizes all resources for the subsistence they provide. Institutional elaboration among this population is absent. Instead, the household, albeit changed in composition in some cases, has remained the primary cooperative social unit. It is the smallest unit capable of securing a livelihood in the ubiquitous rain forest. Such organization has been maintained throughout the flux in regional contacts and external resources. The continued emphasis on the individual within the household context is reflected in the kinship system.

others. That is, this population is encapsulated relative to access to regional transportation and communication and control of market opportunities. Limited regional markets including employment have been conveyed into the Upper Barama River area by non-Carib middlemen. As a consequence, a limited number of Caribs have become clients to middlemen patrons and have brought their sons or sons-in-law into an employment opportunity. In this manner, extended household organization in which a son or son-in-law and his family remain with the parents is one pattern of organization that is evident among the Upper Barama River Caribs.

There is one further note to make on the social organization of the Upper Barama River Caribs. That is, the instrumentality of the one type of local communication event has changed relative to shifts in the boundaries of the resource-sharing social unit. The cassiri spree provides for the institutionalized interaction of individuals through songs, dances, and other encounters. As Gillin observed it (1936:60-70,137-139), a spree was held by one man but participation tended to include the residents of one settlement, although strangers were usually welcomed. A program of activities was continued for several days until the supply of cassiri was exhausted. During this time individuals engaged in a formalized manner related in different ways to the people they saw almost continually. In addition, the event itself expressed the solidarity of the people participating. Less than total participation of the residents in a settlement was indicative of the strained relationships which were a prelude to the relocation of households.

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

*177 527 • 182 During employment in mining, a spree lasted only a number of hours. Participation clearly crosscut resource-sharing social units. The spree served to bring together people whose daily activities tended to provide no other basis for contact. The cassiri spree was also used to gain job reinstatement in inducing other Carib miners to neglect work schedules. At Baramita Air Strip, cassiri sprees continue to bring a large number of people together in a party atmosphere for only a number of hours. It has been held to distribute food and clear up any residue of obligations for participants in a kaiyap or group work day. Also, the Amerindian Captain has [622] sponsored sprees which include all the residents of the Air Strip and coincide with national Guyanese holidays. At other times, sprees are held among neighbors. Time depth is achieved only when a number of people hold sprees more or less in succession, which might happen during a weekend. Participation is by verbal invitation and the participants at each spree vary. In the different organizational contexts, the cassiri spree has been used as a communication event for different expressions and to convey different purposes.

*177 184 594 Reports on other Carib populations affected by regional economies are available. The villagers of Cachama and Mamo in Venezuela (Schwerin 1966) and the Maroni River Caribs of Surinam (Kloos 1971) tend to be primarily organized in nuclear families. The Caribs of Cachama and the Maroni River reserve some economic ties within a larger kinship group, usually the nuclear families of parents and adult offspring, especially daughters. Families in such a group tend to live near each other. Basically, these Caribs remain

2: Adams E-4,5 (1970-1971) 1973 SR9 Carib SR9
(1932-1971) Barama River

VI

CONCLUSIONS

In the previous chapters, attention has been given to the correlations over time of resources available for exploitation and the size and organization of a single population. The economic and reproductive adjustments of the Upper Barama River Caribs have been investigated. In their specific pathway from relative isolation in the rain forest into a national political economy, social organization and population size have been related to resource development. As this population has been centralized by common participation in networks of regional exchange, the household has emerged as the resource-sharing social unit. Ties of general reciprocity with a wider kinship group have tended to be dissolved. Another type of organization which has emerged to consolidate advantage in the regional economy has been client relationships with a middleman patron. In addition, external sources of food and clothing and medical care have tended to override relationships between population size and adaptation to local rain forest resources. An accelerating rate of population growth is currently evident among the Upper Barama River Caribs. In short, this population has evidenced changes in organization and increased population size under the conditions of its national integration.

Adapting to the rain forest, the Upper Barama River Carib population participated in the direct organism-to-organism cycling of

energy characteristic of this environment. Slash-and-burn cultivation is a replication of the rain forest, and in this manner, human groups do not extend their niche through agriculture but rather integrate food production with the extant biotic community (Geertz 1963:15-28; Meggers 1971:19-21). The productivity of cultivation, hunting, fishing, and gathering were the essential components of subsistence, and the Upper Barama River Caribs, limited in population size, shifted in location as a response to these endeavors. As a consequence of this semi-nomadic adaptation, the largest social unit was the settlement, within which the sharing of resources and the exchange of labor were patterned.

In contrast, wage labor and other regional markets and modern medical technology have combined to expand the niche of the Upper Barama River Carib population. In turn, population size has expanded. At the time of Gillin's (1936) study in 1932-33, the Upper Barama River Caribs numbered about 200 and were located in dispersed settlements along the river corridor. There are now more than 550 Caribs nucleated around Baramita Air Strip. This increase in size has been achieved despite losses due to migration. The current rate of increase is about eight percent annually. Coupled with a low death rate, this is indicative of the potential for further increases among this population. Using population size as the coefficient of adaptation as proposed by Alland (1967, 1970), clearly a successful adjustment has been made to the new resources available over the short term generation-to-generation time span.

In this context, any projections for either the future of the

121 It would appear that studies of the relationships between popu-
• 182 lation size and competition for local and external resources in the
*177 process of modernization, as in the case of the Upper Barama River
Caribs, are appropriate in many similar situations throughout the
[131] world. In the Guyanas, which includes the area bounded by the Rio
Negro, Amazon and Orinoco rivers, local Amerindian populations are
subject to a variety of geographical environments and regional in-
[133] fluences. The geographical areas include coastal, inland mountain-
savannah, and interfluvial rain forest environments (Gillin 1948:800).
Nevertheless, each area is not monolithic regarding the regional in-
fluences of national agencies, missionary groups, and entrepreneural
agents which also generate adaptive strategies on the part of local
populations.

*177 For example, the interfluvial area in which the Upper Barama
182 River Caribs are found is also inhabited by other Amerindian popu-
171 lations, including Caribs, with different adaptations. Along the
184 border between Venezuela and Brazil, the Yąnomamö (Chagnon 1968)
[101] adapt essentially to the rain forest and engage in warfare, charac-
terized by its attrition, which contributes to the dispersion and
limitation of this population. Although they rely on the European
introduced plantain as the staple crop, they are largely unaffected
by direct external influences. By contrast, the Trio (Rivière 1969),
a Carib speaking group, have been recently nucleated around mission
stations, a Roman Catholic mission in Brazil and two Protestant
missions in Surinam. Carib groups outside the interfluvial area
also add contrast to the adaptations of the Upper Barama River Caribs.

More modernised groups include the Caribs of the Maroni River in Surinam (Kloos 1971) and those in western Venezuela (Schwerin 1966) who are differently affected by the economies of the nations of which they are a part. The diversity of local environments and regional influences invite comparative inquiry concerning economic and reproductive adjustments of local populations. Such inquiries among the Amerindians of the Guyanas remain tied to the realities of the developing world and concern the initial stages of the integration of local populations into national political economies.